IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: : Group Art Unit: 2126

                                              : Examiner: H. N. PATEL

Balijeet S. Baweja et al.   : Intellectual Property

Serial No: 09/589,799   : Law Department - 4054

Filed: 06/08/2000   : International Business

Title: AN INTERACTIVE DATA   :   Machines Corporation

PROCESSOR CONTROLLED DISPLAY   : 11400 Burnet Road

INTERFACE FOR TRACKING OF   : Austin, Texas 78758

ALLOCATED MESSAGES IN A   : Customer No. 32,329

DYNAMIC WORKLOAD BALANCING   :

COMMUNICATION SYSTEM   :

Date: _August 6, 2005_   :

CERTIFICATE OF MAILING

I hereby certify that this correspondence including a Corrected Brief on Appeal (in triplicate) is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on _August 6, 2005_.

J.B. KRAFT

_____

Signature _____   Date 8/6/2005

TRANSMITTAL OF APPELLANTS' BRIEF UNDER 37 CFR 1.192(a)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached is Appellants' New Brief (in triplicate) in this Appeal from a decision of the Examiner dated November 19, 2004 finally rejecting claims 1, 3-7, 9-12 and 14-17. This New Brief was required by the Notificantion of Non-
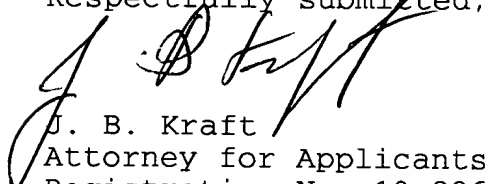
AUS920000172US1

<u>Compliant Appeal Brief</u> mailed July 27, 2005 and corrects an omission in the original Brief

No additional fee is required.

The Commissioner is hereby authorized to charge any additional fee which may be required or credit any overpayment to Deposit Account No. 09-0447. A duplicate copy of this document is included.
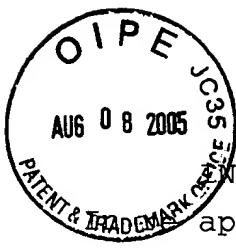

Respectfully submitted,

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Balijeet S. Baweja et al.

Serial No: 09/589,799

Filed: 06/08/2000

Title: AN INTERACTIVE DATA PROCESSOR CONTROLLED DISPLAY INTERFACE FOR TRACKING OF ALLOCATED MESSAGES IN A DYNAMIC WORKLOAD BALANCING COMMUNICATION SYSTEM

Date: _8/06/05_

: Group Art Unit: 2126
: Examiner: H. N. PATEL
: Intellectual Property
: Law Department - 4054
: International Business
: Machines Corporation
: 11400 Burnet Road
: Austin, Texas 78758
: Customer No. 32,329

NEW BRIEF ON APPEAL
(As Corrected)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an Appeal from the Final Rejection of Claims 1, 3-7, 9-12, and 14-17 of this Application. An Appendix containing a copy of each of the Claims is attached.

I. Real Party in Interest

The real party in interest is International Business Machines Corporation, the assignee of the present Application.

II. Related Appeals and Interferences

None

AUS920000172US1

III. Status of Claims

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

There are 14 claims in this Application.

B. STATUS OF ALL THE CLAIMS

1. Claims cancelled: 2, 8, 13, and 18-20.
2. Claims withdrawn from consideration but not cancelled: None.
3. Claims pending: 1, 3-7, 9-12, and 14-17.
4. Claims allowed: None.
5. Claims rejected: 1, 3-7, 9-12 and 14-17.

C. CLAIMS ON APPEAL

Claims on appeal: Claims 1, 3-7, 9-12 and 14-17.

IV. Status of Amendment

No amendments have been filed after Final Rejection.

V.   Summary of Invention

The present invention is directed to dynamic workload distribution in a message driven transaction environment. In such a message driven transaction environment, a user initiated transaction is allocated to each of a set of messages distributed for performance. In the message driven transaction environment of the present invention, all of the protocols in the distribution and message allocation needed to complete user input transaction requests are invisible or transparent to the user including workload allocation and balancing via message queues. However, transparentness of the workload balancing causes operation problems to workload balancing system administrators in the case where messages are delayed or even lost in distribution and allocation.

The present invention, as defined in independent claims 1, 7, and 12, provides a user interactive display means for monitoring the allocation and distribution of the transaction messages at all levels of the distribution hierarchy, and storing the plurality of these allocated messages from the distribution in a queue (page 7, lines 22-23) at the server (server 51, Fig. 1, page 7, lines 18-22) which controls the distribution. This queue may be interactively displayed by the user (on display terminal 50, Fig 1) to thereby display (page 10, lines 1-20, and message queue 80 of Figs.3-5) the queue of allocated distributed messages and the computer systems (delegated computers 89 in Figs. 3-5) associated with the allocated messages.

Dependent claims 6 and 17 to be argued separately include means for requesting the performance of a data processing transaction (page 9, line 29, to page 10, line 1) and user interactive display means for displaying said allocated messages and associated computer systems (Figs. 3-5, queue listing 80).

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Dependent claims 4, 5, 10, 11, 15, and 16 to be argued separately include the limitation that the computer systems involved have means for reallocating messages to other computer systems (Fig. 5, allocation history of sixth queue item, described page 10, lines 12-15).

VI. Grounds of Rejection

Claims 1, 3-7, 9-12 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobe et al. (US5,778,224) in view of Kitagawa (US6,578,159) in view of "Official Notice" taken by Examiner.

VII. Argument

Claims 1, 3-7, 9-12 and 14-17 are unobvious under 35 U.S.C. 103(a) over Tobe et al. (US5,778,224) in view of Kitagawa (US6,578,159) in view of "Official Notice" taken by Examiner and, thus, are patentable.

In combining the above references, the Examiner has picked and chosen elements for the combination not based upon any suggestion in these references themselves but based upon Applicant's own teaching. Combinations of references on such a basis can not result in a finding of obviousness.

Furthermore even if the references could be combined as proposed by Examiner, the present invention would still not be suggested. The Examiner still has to rely on taking "Official Notice" of the obviousness of incorporating a key element into the combination which Applicants submit can only be based upon Applicants own teaching.

In the dynamic workload distribution in a message driven transaction environment of the invention, each user initiated transaction is allocated to each of a set of messages which are distributed for performance. However, if messages are delayed or even lost in distribution and allocation, there currently is no effective way of tracking lost or delayed messages. The present invention provides a user interactive display means for monitoring the allocation and distribution of the transaction messages at all levels of the distribution hierarchy, and storing the plurality of

these allocated messages from the distribution in a queue at the server which controls the distribution. This queue may be interactively displayed by the user to display the queue of allocated distributed messages and the computer systems associated with the allocated messages.

This is defined in the illustrative claim:

"1. A workload balancing system for distributing data processing transactions into a plurality of messages and for dynamically allocating each of said messages to different computer systems for performance comprising:

means for requesting the performance of a data processing transaction,

a server computer for said distributing said transaction into a plurality of messages and allocating said messages to different computer systems,

a server queue associated with said server computer for storing the plurality of messages from the distributed transaction, and

user interactive display means for displaying said queue of allocated messages and associated computer systems." (underlining provided)

Applicants concur with Examiner that the Tobe et al. patent discloses a workload distribution environment involving the execution of sets of transactions, and Applicants will concede that Kitagawa patent could be said to suggest that in the workload distribution, transactions may be broken into a plurality of messages. But, Applicants have already conceded this to be known in the background of their invention in the present specification.

However, as to the keys to the present invention: "a server queue associated with said server computer for storing the plurality of messages from the distributed transaction, and   user interactive display means for displaying said queue of allocated messages and associated computer systems", both Tobe and Kitagawa are completely silent. The Examiner is forced to offer the weak rationale of taking "Official Notice" that such queues are well known and expected in the art.

Applicants submit that queues in general are known in the art. However, what is unknown in the art is the Applicants' recognized problem of the difficulty of tracking allocated messages in workload distribution systems which are lost or delayed, and Applicants' novel solution of storing all messages distributed and allocated by the server in a server queue which the user is enabled to display. "Official Notice" should not be permitted to obviate this whole point of invention.

In connection with taking Official Notice, with respect to queues, the Examiner notes Gossler et al. (US5,799,173) but does not specifically apply it in any rejection. Goessler is just a teaching that queues are generally used in connection with computers which the patent calls clients or servers interchangeably, dependent on which computer is the requester i.e. "client", or provider i.e. server (see col 1, lines 24-26).

Dependent Claims 6 and 17 are specifically Patentable over above combination of references.

Claims 6 and 17 are submitted to be patentable for allof the reasons set forth above for the independent claims from which they depend. In addition, claims 6 and 17 set forth that a user is enabled to display on his computer display, via the queues defined above, the message allocations of the any transaction. This is defined in the illustrative claim:

"6. The workload balancing system of claim 1 further comprising an interactive display computer including said means for requesting the <u>performance of a data processing transaction</u> and <u>user interactive display means</u> for <u>displaying said allocated messages</u> and associated computer systems."

Examiner points to Figs. 2, 3, 4, 7, and 8 in Tobe as teaching. Applicants take issue with such an interpretation of these Figures. What Tobe teaches is a workload distribution system in which a plurality of <u>distribution arrangements are predefined</u>, e.g. predefined rules or protocols for distributions among the plurality of computers in this distribution system. Thus when, as proposed by Examiner, the user selects to <u>view such arrangements</u>, for a particular computer, he is <u>not viewing anything suggestive of a message allocation queue</u>. He is merely viewing a predefined set of distribution rules or protocols for the particular computer.

Dependent Claims 4, 10, and 15 are specifically Patentable over above combination of references.

Claims 4, 10, and 15 are submitted to be patentable for all of the reasons set forth above for the independent claims from which they depend. In addition, these claims set forth that the computer systems involved have means for reallocating messages to other computer systems. This is defined in the illustrative claim:

"4. workload balancing system of claim 3 wherein at least one of said different computer systems has means for <u>reallocating to other computer systems, messages initially allocated to said one computer system</u>."

Being unable to find anything related to reallocation of messages in the allocation queues, the Examiner again resorts to a further "Official Notice", i.e. that reallocation between computers is generally known. Applicants do not claim to have invented reallocation. However, in an environment where the user may interactively access and display the allocation of the message queue at the server which distributes transactions and allocates their messages, the reallocation function does take on an additional significance not suggested by the general reallocation art which the Examiner is taking Official Notice of. Claims 5, 11, and 16 are even further defined by such elements as illustrative claim 5 indicates:
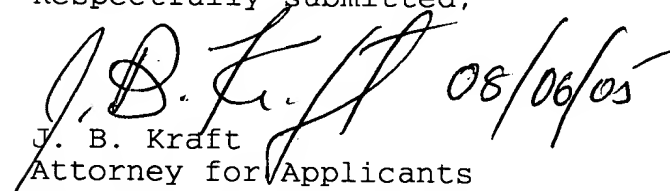
"5. The workload balancing system of claim 4 further including user interactive means for <u>displaying said reallocated messages and computer systems to which said messages are reallocated</u>."

Conclusion

In view of the foregoing, claims 1, 3-7, 9-12 and 14-17 are submitted to be unobvious under 35 U.S.C. 103(a) over Tobe et al. (US5,778,224) in view of Kitagawa (US6,578,159) in view of "Official Notice" taken by Examiner and, thus, are patentable.

Accordingly, the Board of Appeals is respectfully requested to reverse the final rejection and find claims 1, 3-7, 9-12 and 14-17 in condition for allowance.

Respectfully submitted,

08/06/05

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<u>VIII. Claims on Appeal (Appendix)</u>

1   1. A workload balancing system for distributing data
2 processing transactions into a plurality of messages and for
3 dynamically allocating each of said messages to different
4 computer systems for performance comprising:
5   means for requesting the performance of a data
6 processing transaction,
7   a server computer for said distributing said
8 transaction into a plurality of messages and allocating said
9 messages to different computer systems,
10   a server queue associated with said server computer for
11 storing the plurality of messages from the distributed
12 transaction, and
13   user interactive display means for displaying said
14 queue of allocated messages and associated computer systems.

1   3. The workload balancing system of claim 1 wherein each of
2 said different computer systems has an associated queue for
3 storing messages allocated to each respective computer
4 system.

1   4. workload balancing system of claim 3 wherein at least
2 one of said different computer systems has means for
3 reallocating to other computer systems, messages initially
4 allocated to said one computer system.

1   5. The workload balancing system of claim 4 further
2 including user interactive means for displaying said
3 reallocated messages and computer systems to which said
4 messages are reallocated.

1 6. The workload balancing system of claim 1 further
2 comprising an interactive display computer including said
3 means for requesting the performance of a data processing
4 transaction and user interactive display means for
5 displaying said allocated messages and associated computer
6 systems.

1 7. A method for distributing data processing transactions
2 into a plurality of messages and for dynamically allocating
3 each of said messages to different computer systems for
4 performance comprising:
5   requesting the performance of a data processing
6 transaction,
7   distributing said transaction into a plurality of
8 messages and allocating said messages to different computer
9 systems,
10   storing the plurality of messages from the distributed
11 transaction in a queue, and
12   interactively displaying said stored plurality of
13 allocated messages and computer systems.

1 9. The method of claim 7 including the step of storing
2 messages allocated to each respective computer system in a
3 queue associated with said computer system.

1 10. The method of claim 9 further including the step of
2 reallocating to other computer systems, messages initially
3 allocated to one of said different computer systems.

1 11. The method of claim 10 further including the step of
2 user interactively displaying said reallocated messages and
3 computer systems to which said messages are reallocated.

1   12. A computer program having program code included on a
2   computer readable medium for workload balancing of
3   distributed data processing transactions comprising:
4   means for requesting the performance of a data
5   processing transaction,
6   means for distributing said transaction into a
7   plurality of messages and allocating said messages to
8   different computer systems,
9   queue means for storing the plurality of messages from
10 the distributed transaction, and
11   user interactive display means for displaying said
12 queue of allocated messages and associated computer systems.

1   14. The computer program of claim 12 wherein each of said
2   different computer systems has an associated queue for
3   storing messages allocated to each respective computer
4   system.

1   15. The computer program of claim 14 further including
2   means for reallocating to other computer systems, messages
3   initially allocated to said one computer system.

1   16. The computer program of claim 15 further including user
2   interactive means for displaying said reallocated messages
3   and computer systems to which said messages are reallocated.

1   17. The computer program of claim 12 wherein said means for
2   requesting the performance of a data processing transaction
3   and said user interactive display means for displaying said
4   allocated messages and computer systems are in a user
5   interactive display computer.